monochlorodihydroxypropanol. In the above reference, wheat gluten is hydrolyzed using Prozyme 6 (a fungal protease) at a temperature of 40-50°C, pH 6.5-7.0, enzyme concentration of 0.1-2% of substrate for a time period of 4h. the hydrolyzed protein is treated with gaseous HC1 for deamidation before the addition of acid for inactivating the enzyme. The drawback in such hydrolysis is that it is likely to lead to racemisation of amino acids and the addition of acid increases the salt content in the product.

Amend

The paragraph beginning on line 4 of page 2 is rewritten as follows:

United Sates Patent No. 5077062 claimed a low sodium, low mono sodium glutamate soy dydrolysate that is prepared from soy material such as soy flour, soy meal or soy grits using fungal protease in water. The hydrolysis is conducted in the absence of acid or base at 90°C for 2 h. After deactivating the enzyme and de-watering the mixture, the resulting hydrolysate contains between 45 and 55 wt. % enzymatically hydrolysed soy based protein with an average molecular weight of 670,000 ± 50,000. The fungal protease used is different from the enzyme used in the present invention. The process is energy intensive due to the high temperature (90°C) used.

A2

The paragraph beginning on line 13 of page 2 is rewritten as follows:

United States Patent No. 4757007 claimed a preparation of two hydrolyzed products using a protease from soy protein. The soy protein is hydrolyzed with papain or pepsin after precipitating with alcohol. The drawback of the process is that it involves the separation of the mixture of hydrolyzed products. Hydrolysis is carried out using papain or pepsin. Acidification is carried out to bring down the pH to 2.5-5.0 to separate the two kinds of hydrolysates, which could lead to increase in salt content.

A3

The paragraph beginning on line 20 of page 2 is rewritten as follows:

European Patent No. 0148600 B1 relates to the preparation of hydrolyzed protein from protein isolate after jet cooking or dynamic heating at 104°C for a few seconds and later cooled in a vacuum chamber before performing hydrolysis using bromelin. The

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protein was precipitated at its isoelectric point from an aqueous extract of the material protein isolate which is more expensive. The process is a multi step process and energy intensive. The process further needs machines like the jet cooker and a vacuum chamber.

The paragraph beginning on line 24 of page 4 is rewritten as follows:

OBJECTS OF THE INVENTION

The main object of the present invention is to provide a process for the preparation of protein hydrolysate from soy flour from plant based protease.

The paragraph beginning on line 1 of page 6 is rewritten as follows:

In one more embodiment of the present invention, they drying is effected by freeze drying, spray drying or drum drying.

~~The paragraph beginning on line 10 of page 6 is rewritten as follows:~~

In another embodiment of the present invention, the protein hydrolysate has 2-2.2g/100ml bitterness recognition threshold units.

The paragraph beginning on line 30 of page 8 is rewritten as follows:

Trinitrobenzenesulphonic acid (TNBS) procedure is an accurate, reproducible and generally applicable procedure for determining the degree of hydrolysis of food protein hydrolysates. The protein is dissolved/dispersed in hot 1% sodium dodecyl suplphate to a concentration of 0.25 - 2.5 x 10^{-3} aminoequivalents/L. A sample solution (0.25 ml) is mixed with 2 ml of 0.2125 M sodium phosphate buffer (pH 8.2) and 2 ml of 0.1% Trinitrobenzenesulphonic acid, followed by incubation in the dark for 60 min at 50 C. The reaction is quenched by adding 4 ml. of 0.10 N hydrochloric acid (HC1) and the absorbance is read at 340nm. A 1.5mM L-leucine solution is used as the standard. Transformation of the measured leucine amino equivalents to a degree of hydrolysis is carried out by means of a standard curve for each particular protein substrate (Adler Nissen, J. (1979) J. Agri. Food Chem. 27,6, 1256-1262).

The paragraph beginning on line 1 of page 10 is rewritten as follows:

Example 2

300g of defatted soy flour is dispersed in 1500 ml of water and the pH of the dispersion was adjusted to 5.5 using 1N HC1. The solution was stirred with mechanical stirrer and the temperature raised to 55°C. 1.5g of papain was added and stirring continued for 3 h. The enzyme was inactivated by boiling for 5 min. The pH of the hydrolysate was adjusted to 6.8 using 6N NaOH. The slurry was cooled and centrifuged. The clear solution was spray dried. The yield was 21% (on flour basis) and degree of hydrolysis was 30%.

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The paragraph beginning on line 10 of page 10 is rewritten as follows:

Example 3

1 kg g of defatted soy flour was dispersed in 5000 ml of water and the pH of the dispersion was adjusted to 5.0 using 1N HC1. The solution stirred with mechanical stirrer and then the temperature raised to 50°C. 5 g of papain was added and stirring continued for 4 hrs. The enzyme was inactivated by boiling for 5 min. The pH of the hydrolysate as adjusted to 6.5 using 6N NaOH. The slurry was cooled and centrifuged. The clear solution was spray dried. The yield was 20% (on flour basis) and degree of hydrolysis was 30%.

A10

The paragraph beginning on line 27 of page 10 is rewritten as follows:

The soy protein hydrolysate obtained has 25-30 trypsin inhibitor Unit/mg (TIU/mg) activity, 95-98% nitrogen solubility index, 1.0-1.4% of salt content (measured as C1 ions) and 2 – 2.2 g/100 ml bitterness recognition threshold units. The lipoxygenase and urease activities were not detectable. The amino acid composition of the soy protein hydrolysate obtain was similar to the amino acid make up of starting raw material thereby retaining the nutritional value. The protein hydrolysate is less bitter compared to protein hydrolysate obtained from casein and is less hygroscopic in nature.

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